

Project identification

## North/South Line Amsterdam; Crossing IJ-river

Type of project
Immersed Tunnel



Client

Municipality of Amsterdam

In co-operation with

Project assignment

Feasibility study, preliminary design, final design, tender design, tender documentation and evaluation, detailed design and contract management & supervision

Country

The Netherlands

Project duration 1994-2012

Construction cost € 120.000.000,= (excl. VAT)

Location Amsterdam

Project phase all project phases

Consultancy fee

More than € 200.000.000,- for the entire North South Line project (excl. VAT)

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Type of project Immersed Tunnel

Project description

The North/South Metro Line crosses the IJ-river by means of an immersed tunnel. The immersed part has a length of approx. 425m and consists of three elements of 142 m. The two track metro tunnel is 11.25m wide and 7.55m high. The northernmost element is partly located in the IJ embankment and subjected to a high ground load. At the south end the immersed tunnel has to deal with very poor soil conditions.

The tunnel elements were constructed in the building pit of the northern approach. After completion the building pit was flooded, the tunnel elements were floated up and transported to the Suez Harbor in the western Amsterdam Port are. The elements were moored for 4 years to wait for the completion of the northern approach and the metro station Central at the south end. The tunnel elements were immersed in autumn 2012.

The northern approach was constructed using conventional cut&cover techniques.

Scope of work

The consultancy services included:

- Feasibility study in which the immersed tunnel was compared against the bored tunnel
- Pre-design, final design, tender design and detailed design
- Tender documentation and consultation
- Contract management and supervision.